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AUTHOR Emerton, R. Greg; Rothman, Gail
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ABSTRACT

A 6-month study involving 30 college students was conducted to investigate what happens when hearing students are confronted with deaf students on a daily basis. During the summer, Ss were given a 25-item questionnaire taken from the Attitudes towards Deafness scale. Six months later, face-to-face interviews were conducted with 30 of the initial respondents. Among findings were the following: hearing students generally have a positive attitude toward deaf people prior to their arrival on campus; there is little difference in attitudes between hearing students living in the residence halls where hearing students were in the majority and those living in the complex where deaf students were the majority; and there seems to be a difference in the attitudes of students depending upon the program or major in which they are enrolled. (SBH)

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A Study of Attitudes Toward Deafness and its Implications for Mainstreaming

R. Greg Emerton and Gail Rothman

National Technical Institute for the Deaf
Rochester Institute of Technology
Rochester, New York 14623

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Introduction

Mainstreaming is one of the major issues before the public (e.g., TIME, 1976) in educational policy making today. In the past, educational laws have supported the exclusion of many handicapped children from regular educational programs. But in recent years, as a result of public opinion, court actions, due process regulations and mainstreaming statutes, public schools have been assuming more and more responsibility for meeting the educational needs of all children including the handicapped (Hehir, 1975; Brill, 1974; Bitter and Johnson, 1973).

The education of deaf children is one of the areas in special education where discussion of this issue has been especially vigorous. A key assumption in mainstreaming is that handicapped children can best develop educationally and socially in the "least restrictive environments." The implications and operational definition of this assumption are the subjects of much debate (e.g. Brill, 1976; Vernon and Prickettt, 1976; Holcomb and Corbett, 1975; Bellefleur, 1974). Most of the attention, however, has focused upon educational requirements for mainstreaming. A few studies which have addressed social aspects of mainstreaming have focused primarily on the deaf students (e.g. Bruininks and Kennedy, 1973; Craig, 1965). Little consideration has been given to studying the other students who play a vital role in the social setting (Jacobs, 1976).

Objectives of the Study

This study addresses the general question of what happens when hearing

students are confronted with deaf students on a daily basis. Specifically, the investigators examine changes in attitudes toward deafness among hearing students by comparing pretested attitudes about deaf stereotypes with attitudes expressed toward deaf people along the same dimensions after six months of going to school with a relatively large number of students who are deaf.

Overview of the Problem

Western society has historically held a negative stereotype for deaf people (Bender, 1970). They have often been considered to be "on a subhuman level, incapable of education or culture, bereft of human intelligence" (Furth, 1966:7). Perhaps twentieth century people are more enlightened and humanistic than their ancestors. The concept of universal education has led to acceptance of the idea that deaf people can be educated and can become productive and useful members of society. But, various prejudices toward and sterotypes of deaf people persist (Best, 1943). In 1953, Roger Barker and his associates pointed out that "although studies of stereotypes of the deaf and hard of hearing are lacking, familiar jokes and stories about them attest that such stereotypes are widespread." More recently, Ruth Bender (1970) has decried the ignorance in the general population about deaf people as reflected in the persistence of terms such as deaf-mutes and deaf and dumb in most languages and countries.

Studies of attitudes suggest, however, that the American population tends to be rather indifferent toward deaf people. Strong (1931) found

that 59% of his subjects felt indifferent toward deaf people, while 25% disliked and 16% liked deaf people. Barker (1953) indicated that this was slightly more negative than the reactions subjects had towards the blind. In other studies where attitudes towards various disabilities were compared (Gowman, 1957; Murphy, 1960; Murphy, Dickst. n and Dripps, 1960), deafness was regarded less negatively than other dia lities such as blindness.

Cowen, Bobrove, Rockway, and Stevenson (1968) found attitudes toward the deaf and the blind were almost identical both in magnitude and direction. They inferred that "attitudes towards disability conditiions share some generalized common elements with attitudes towards minority groups" (Cowen, et. al., 1968:187). Schrodel and Schiff found in 1972 that attitudes toward deafness tended to be neutral or slightly positive across several populations.

Deaf people themselves report generally negative attitudes toward deafness. Schrodel and Schiff (1972) reported that the deaf people sampled in their study were consistently more negative in their attitudes toward deafness than comparable samples of hearing people. They suggested the possibility that attitudes of deaf people may reflect actual experiences while hearing persons may not have thought about their feelings towards deafness and give spuriously positive reactions. Subjective accounts written by deaf people about their experiences living in a society where most people can hear (Greenmun, 1958; Stewart, 1972) lend support to this idea.

Thus there appears to be some difference of opinion about the nature of public acceptance of deaf people. Because attitudes (positive, negative or neutral) could be a vital ingredient in the success or failure of mainstreaming efforts, this difference is worthy of further investigation.

Theoretical Perspectives

Social Identification

Attitudes are commonly defined as enduring systems of positive or negative evaluations, emotional feelings, and pro or con action tendencies with respect to a social object (Krech, Crutenfield and Ballachy, 1962). In this paper the attitudes being studied are those of hearing students. Deafness (and concomitantly deaf people) is the social object. Deafness is suggested as the social object because it is a social identity (see Emerton, 1973).

The term identity refers chiefly to the question of what a person is and where he belongs (Stone, 1962). When a person has identity, he is established a a social object: he is perceived as a member of particular social categories, and assumed to possess the attributes which correspond to those categories. From the viewpoint of society, such placement is mandatory to facilitate successful interaction between diverse groups of individuals. In the words of Nelson Foote:

> Every man must categorize his fellows in order to interact with them. We never approach another purely as a human being or purely as an individual...the regularities in our behavior toward him are necessarily based upon our expectation of regularities in his behavior. The regularities in his behavior toward us are in turn based in the same way upon his sharing our conception of his identity and his expectation that we share his conception of our identity (1951:17)..

Social identification occurs when those making the assignment have at least tentatively concluded that this individual is an instance of a more generalized category. Such identification is usually related to particular social roles which have a set of prescriptive roles and guides to behavior for persons of a given category. The fleeting interaction of customers and retail clerks is an example.

Stereotypes are a form of social identification. Here there are categorical expectations but without prescriptions, and it is a matter of controversy as to whether or not the category performs in such a way as to confirm the expectation (Brown, 1965:172-3). Examples of this abound: "Blacks are lazy;" "Jews are pushy;" "Deaf are dumb."

Isaacs (1972) tried to determine whether or not stereotypes of deaf students were accurate and objectively based on the characteristics of this group. Using the Gough Adjective Check list, he found that hearing students described deaf students as "obnoxious, argumentative, moody, careless, immature, and so on although not really vicious or mean" (1972:17). Using the same instrument with deaf students, he found the same stereotype of deaf students articulated even more emphatically. He then administered the 16 Personality Factors (16PF) Form E test to the subjects in both groups. The results showed the sampled deaf students in general to be emotionally stable, friendly, socially conforming individuals. The patterns on the 16PF were essentially the same for both groups except that the deaf subjects were significantly more group dependent, more emotionally stable, more outgoing, and more socially

precise than the hearing subjects. These results were confirmed by the Crowne-Marlowe Scale of Social Desirability and the Christie-Geis Machiavellianism Scale which were also administered.

Isaacs' study has a number of limitations. Among these are small sample size and the fact that the subjects were not necessarily representative of the college population (deaf and hearing) as a whole. Nevertheless, the study is thoughtful. At the end of his report, Isaacs poses a number of questions for future research. Some of these are important here.

> When does the stereotype of the deaf form for the hearing? Is it already possessed by incoming freshmen, or is it formed during contact with deaf students? Is it strongest during the "cultural shock" of first encountering large numbers of "different" people with odd methods of speaking and communicating, and does it then dissipate as the subject grows accustomed to the deaf or does it grow firmer with each additional contact? What can be done to counteract the erroneous stereotype of the deaf held by the hearing? Will information or an emotional appeal best change the image, or will enforced contact, voluntary contact, or some combination of these? (Isaacs, 1972:22-23).

The literature reviewed suggests that negative stereotypes of deaf people are part of the culture. The research cited above indicates that attitudes held by hearing people in society at large are generally indifferent, perhaps slightly negative but definitely bland. Consider now some theoretical reasons why this may not be contradictory.

Stereotyping and Stigma

Stereotypes, as previously noted, are a form of social identification. They exist in culture as part of the collective experience of the group. Stereotypes assist individuals within the society to interact with

diverse groups of people with whom they may never have had personal contact.

In the "ideal" culture of American society, a person is supposed to be judged on the basis of his own action. In the "real" culture, this is somewhat limited by traditionally ascribed social variables such as race, sex, religion, or national ancestry.

Much attention has been focused in recent years on "normal deviants." These are people such as juvenile delinquents, prostitutes, homosexuals, suicides and others whose behavior deviates from and in doing so overtly threatens traditional values of society. Women, Blacks, Jews, and Chicanos are examples of minorities with traditionally ascribed status. All of the labels or symbols used here evoke an image. These images are stigmatized to some degree.

Individuals identified with the symbols above are people who might be easily received in ordinary social interaction but possess a characteristic that can obtrude itself upon attention and turn away those of us whom they meet, breaking the claim that their other attributes have on us (Goffman, 1963:7). The presence of stigma creates special conditions for social interaction. In all situations, the possibility is open for intrusion by the stigma which makes the person different from others. Not only is the person different but by defintion of a less desirable kind. The stigmatized person is seen as lacking in some essentially

human characteristics and is not accorded the status of a "normal" individual (Goffman, 1963:5).

The "normative deviant" is supposedly stigmatized as a result of his or her own behavior. The other groups mentioned above have traditionally ascribed status. Justifiably or not, society is able to proceed with these social identities. The physically impaired person, however, is also stigmatized. (S)he is disqualified from full social acceptance because of an attribute that is deeply discrediting in ordinary social relationships. (Safilios-Rothchild, 1970). But (s)he has done nothing "wrong". (S)he has a physical disability which could happen to anyone regardless of socioeconomic status, race, sex, religion, or national ancestry. The handicapped person is an enigma.

The "ideal" culture of society suggests that the physically impaired person having done nothing wrong and coming from every spectrum of society should not be held accountable for his or her situation. But still (s)he has an undesired differentness. Theories of social distance (Borgardus, 1959) suggest that as long as people in the society are not confronted with the stigmatizing characteristic, they may be able to maintain the "ideal" norm. Interacting with the handicapped person, on the other hand, may force them to deal with the reality of the social situation.

Beatrice Wright (1966) illustrates this situation very well.

> Commonly, with respect to a person who is deaf, the subject holds higher expectations than are borne out by what ensues because the deaf person, looking just like anyone else, is

> expected to act like anyone else. The subject expects a person who is deaf, for example, to be able to communicate (speak and listen) with him but discovers he cannot... Depending upon his social psychological postion with respect to the disability situation, the subject may revise his expectation downward.

What we see here is at least partial, perhaps even total, collapse of role expectations. The physically impaired person has no clear role as a handicapped person (Westie, 1975). If (s)he is to be treated normally, (s)he must meet the expectations others have for him or her. If (s)he cannot, the interaction becomes strained (see Davis, 1961).

Violation of expectations sometimes can be due to sub-cultural differences. Schief and Saxe (1972), for example, suggest that deaf and hearing subcultures may constitute sources of difference in interpersonal perception. In their study, deaf and hearing subjects evaluated high levels of activity in social interaction differently "... the deaf Ss evaluated high levels of intensity positively, but the hearing Ss find them 'phony,' insincere, or indicative of compensatory behavior for felt inadequacies" (1972: 224-25).

Other times, expectations are simply not borne out in everyday behavior. In the college setting, for example, one of the key roles is that of a student. As such, this role usually supersedes (in terms of expectations) the other roles available to an individual attending the institution. Walter (1969) conducted a study of attitude changes among college faculty members as a function of having deaf students integrated into their classes. Before deaf students arrived on campus for the

first time, a highly positive attitude predominated among the faculty. Members of this faculty (30%) who participated in an intensive 6-week summer program (preparing them for teaching deaf students and increasing their understanding of deafness and its ramification) were even more positive than those who did not. After 6 months with deaf students on campus, the attitudes of these people were again tested. The results showed an overall drop to a low level of positive affect. Analysis indicated that the pre-experiential summer training did little to counteract this trend. Moreover, faculty members who had deaf students in their classes decreased in positive feelings more than those who did not. Walter's analysis further indicated that the negative nature of these changes seemed to focus on the prospects of deaf students being assimilated into the hearing community and upon their achievement as students in regular classrooms. In his conclusion, Walter suggested that a preparatory program was needed to aid deaf students in meeting the inherent expectations of the student role.

Deafness as a Minority

Deaf people compose a small minority in the United States today (Schein and Delk, 1974). Their inability to hear and its ramification for language, learning and socialization has produced a marked difference between themselves and hearing people. There is some debate as to whether or not deaf people have produced a "true" sub-culture, but the widespread use of American Sign Language as distinct from English, the production of art forms, as evident in the National Theatre of the Deaf,

and the presence of strong organizational structures, such as the National Association of the Deaf, lend support to the argument that they have. Regardless, there are several strong parallels between the social situation of deaf people and the situations of traditional race and ethnic minority groups.

The literature of dominant-minority relationships is extensive. It is not within the scope of this paper to review it extensively (for extensive reviews see Williams, 1947, 1957; Marden and Meyer, 1962). For purposes of this inquiry, a simple list of propositions held by students of dominant-minority relationships is presented as a backdrop to the investigation. This list is as follows:

1. The larger the size of the minority, proportional to the population of the given area, the slower the rate of assimilation.

2. Rapid increases in the numbers of any new group increase antagonism towards the group. In consequence, the position of a minority group may deteriorate for a time until some new equilibrium is established.

3. The greater the cultural difference of the minority group from the host group, the slower the rate of assimilation. Among these cultural differences, those of language and religion are significant.

4. Conflict is especially likely in periods of rapid change in standard of living. The probability of conflict is increased insofar as the changes have a differential impact on various groups.

5. Among the members of any dominant group, the greatest incidence of open conflict behavior towards a given minority will be found among those who are most vulnerable to competition from the minority.

6. The greater the functional proximity of individuals in physical space, the greater the likelihood of social interaction, even in the presence of quite marked prejudices.

7. The more competitive the interpersonal relationship, the less likely it will produce friendliness.

8. Interactions are more likely to lead to interpersonal liking when the interacting parties have the same or similar values relevant to the type of interaction in which they engage.

These propositions are important to trying to understand the attitudes of the hearing students toward deaf students in this study. First, the presence of large numbers of deaf students was new in the history of the school. Prior to 1965, few deaf persons attended the college. In the years since 1965, the deaf portion of the body has risen to about 10%. This is more than ten times the incidence rate for young deaf people in the U.S. population as a whole (Schein and Delk, 1974). Propositions 1 and 2 above suggest that assimilation of the deaf into the student body will be slowed as a consequence. Interpreters, film captions, sign language and other visible indicators of the deaf student on campus, if considered in the light of proposition 3, also indicate that assimilation will be slow. The ready visibility of special facilities and the differing conditions (admissions, tuition, etc.) under which deaf and hearing students attend school, if considered in conjunction with propositions 4 and 5, likewise suggest that some problems could be expected.

On the other hand (given proposition 6, 7 and 8) hearing students and deaf students living in close physical proximity and engaging in cooperative interaction with respect to common interests could be expected to find real friendships.

General Research Questions

On the basis of the literature cited above, six general research questions were formulated for this study:

1. What is the general valence (positive or negative) of attitudes towards deaf people held by hearing freshmen and transfer students prior to arrival on campus?

2. What is the nature of the change (if any) in attitudes towards deaf people among hearing freshmen and transfer students after 6 months on a deaf-hearing campus?

3. Do attitudes towards deaf people vary among hearing students by dormitory residence?

4. What are the most positive attitudes expressed after 6 months by the people in this study?

5. What are the most negative attitudes expressed after 6 months by the people in this study?

6. What known variables or combination of known variables associated with students in this study offer the best possibilities for further investigation into attitudes towards deaf people in this setting?

Data Collection Techniques

The setting is a medium-sized (approximately 7000 students) college campus located in western New York. It is a private, technical institute granting graduate and undergraduate degrees. A random sample of one hundred students was drawn during the spring quarter preceding the investigation from a list of freshmen and transfer students admitted to the college as normal hearing students and scheduled to attend the school for the first time the next fall.

During the intervening summer, these people received a self-administered mail questionnaire and a cover letter explaining the project and soliciting

their cooperation. The questionnaire itself was a 25-item list of stereotypes about deaf people drawn from the "Attitudes towards Deafness" scale developed by Cowen, et al. (1967) and had the following instructions:

> Below are some statements about deaf people. You may think some are right; others you may think are wrong. Please check whether you think the statement is true or false by placing a check mark in the appropriate box next to each statement.

Respondents were asked to place the completed questionnaire in a self-addressed business reply envelope and mail it prior to their arrival on campus. Sixty-two percent of the recipients returned the completed questionnaire before the start of the fall quarter.

After six months, face-to-face interviews were conducted with thirty of the initial respondents using a structured interview schedule. The interview was divided into three parts. Part I was a series of questions aimed at discovering the kinds of information, contacts and experiences which the subjects had with respect to deaf people in general and with deaf students in particular. Part II was a 25-item attitude scale. Sixteen of the 25 items addressed the same stereotypes which are presented in the previous questionnaire. There were also 9 new items which reflected campus stereotypes of deaf students which was expressed both by hearing and deaf students and by faculty and staff. Part III was an optional open-ended opportunity for the respondent to express feelings and comments of his or her own choosing. Items about the student's background and campus activities were also included.

Analysis and Findings

The analysis and findings are presented here by research question:

1. What is the general valence (positive or negative) of attitudes toward deaf people held by hearing freshmen and transfer students prior to arrival on campus?

The initial questionnaire consisting of twenty-five (25) items drawn from the "Attitude Toward Deafness" scale was used to answer this question. Responses were scored as positive or negative according to a key developed by the test originators (Cowen, et al., 1967: 187). When used in this manner, the instrument has a possible range of 0 to 25 with high scores indicating more positive general attitude. Averages and standard deviation summarize the findings.

Results of the initial questionnaire indicate that hearing students generally have a positive attitude toward deaf people prior to their arrival on campus. On the twenty-five item list of stereotypes, freshmen and transfer students rejected four out of five unfavorable characteristics frequently attributed to deaf people. The range was from twelve to twenty-five statements rejected with a mean of 20.22. (sd = 3.97; median = 20; mode = 24.)

2. What is the nature of the change (if any) in attitudes toward deaf people among hearing freshmen and transfer students after six months on a deaf-hearing campus?

To answer this question, the original respondents were followed through their academic year and interviewed about their feelings and attitudes toward deaf people after six months had elapsed. Contact was successful for about one half (30/62) of the original sample. Upon interviewing them we found that eleven (11) subjects had revised their expectations upwards, eighteen (18) had revised their expectations downward and one person reported no change.

The Wilcoxon Matched-pairs Signed-ranks test was employed to measure both the size and direction of the change. The null hypothesis was that the sum of the positive ranks (i.e., people who revised their attitudes upward) would be equal to the sum of the negative ranks (i.e., people who revised their attitudes downward). The test resulted in a Z of -1.37. This is a negative trend but not statistically significant at the .05 level. Therefore, the null hypothesis was not rejected.

3. Do attitudes towards deaf people vary among hearing students by dormitory residence?

The 25 items in the interview schedule relate both to deaf people in general and deaf students in particular. This was used to interview hearing students in the complex predominantly occupied by deaf students and in other residences occupied mostly by hearing students. The respondent was asked whether he or she agreed with a statement, disagreed with the statement or was undecided. Resulting scores ranged

from twenty-five to seventy-five. Fifty-two (52) volunteers participated in this section of the study.

A one-way analysis of variance was performed to assess the relationship between this difference in living arrangements and the overall attitude expressed toward deaf people. Chi-square tests were conducted on the relationship between residences and each of the 25 individual attitudes solicited. Alpha was set at .05.

Overall, the findings indicate that there is little difference in attitudes between hearing students living in the residence halls where hearing students were in the majority and those living in the complex where deaf students were the majority. The means were 37.3 and 37.1 respectively. One-way analysis of variance resulted in an F ratio of .004. Chi-square tests on individual statements in the protocol reveal no significant differences between the two groups on any of the twenty-five items.

4. What are the most positive attitudes expressed after six months by the people in this study?

5. What are the most negative attitudes expressed after six months by the people in this study?

These two questions were treated as one. The attitudes were those expressed by the sampled students in interview. Relative frequencies of positive, neutral/undecided, and negative responses to each item in Part II of the interview schedule were used to rank the statement from the

most positive to the most negative. The rank order of the attitude statements are shown in Table I.

TABLE I

Rank Order of Attitude Statements
on the
Rothman Interview Schedule

Rank	Description	% Response +	0	-
1	Appreciation of Music/Dance	92	3	5
2	Make friends easily	91	3	6
3	Pity for handicap (not sought)	86	9	5
4	Awareness of outside world	85	12	3
5	Range of interests	82	15	3
6	Personal worth	77	22	1
7.5	Noise and sound	80	8	12
7.5	Manual-oral intelligence	75	17	8
9.5	Want everything done for them	72	17	11
9.5	Acceptance of deafness	69	23	8
11	Manipulated by hearing	70	21	9
12	Rude and thoughtless	74	11	15
13	Use handicap-take advantage	68	21	11
14	Support services	65	26	9
15	Deaf impact on the campus	68	14	18
16	Pecular mannerisms	65	18	17
17	Responsibility for actions	61	25	14
18	Abstract thinking	43	51	6
19	Control of emotions	55	23	22
20	Self-confidence	55	22	23
21	Leadership	46	37	17
22	Psychological problems	43	38	19
23	Maturity	42	18	40
24	Stay to themselves	45	10	45
25	Government aid	29	42	29

The results show the students in this study to be generally positive toward their deaf peers. On seventy-five percent (19/25) of the statements,

the majority of students were clearly positive in their responses. On the issues of abstract thinking by deaf people and extra government aid for the education of deaf students, the respondents in this study were ambivalent.

In three areas, however, less than half of the hearing students responded positively. The full statements in these cases read as follows:

1. The behavior of deaf students is generally as mature as hearing students.
2. The deaf students seem to have more psychological problems than hearing students do.
3. Deaf students seem to seek and assume leadership roles as much as other students.

In the case of "maturity", forty percent of the respondents rejected the notion. In the other two statements, substantial numbers of the interviewees were undecided. Another statement, "The deaf seem to prefer to stay to themselves" was also in the negative category but this appeared to be matter of fact rather than an expression of negative attitude.

6. What known variables or combination of known variables associated with students in this study offer the best possibilities for further investigation into attitudes towards deaf people?

The dependent variable in the question above was the general attitude towards deaf people expressed by students in interviews. The predictor variables came from data collected in Part I of the same interview.

These included:

Background

1. Sex
2. College program
3. Year in school

Knowledge

4. Met a deaf person before coming to campus
5. Read about deafness before coming to campus
6. Attended the orientation week presentation on deafness
7. Took a tour of the deaf facilities

Involvement

8. Deaf roommate
9. Academic (notetaking, tutoring, etc.)
10. Extra-curricular (sports, clubs, etc.)
11. Social (movies, dances, dating, etc.)
12. Manual communication classes
13. Strong positive experience
14. Strong negative experience

The Automatic Interaction Detection (AID) program was used to sort background variables, knowledge about deafness, and involvement with deaf students as they accounted for variation in the overall attitudes expressed by the subjects toward deafness. (Sonquest and Morgan, 1964).

Basically, AID examines the interaction of a set of predictor variables and one dependent variable by successive applications of one-way analysis of variance. This is a non-symmetrical branching process which divides the sample into a succession of subgroups which maximizes the ability to predict values of the dependent variable.

Of fourteen predictor variables, eight were selected by the AID program. These were:

1. College/program
2. Took a tour of the deaf facilities
3. Met a deaf person before coming to college on deafness
4. Attended the orientation week presentation
5. Extra-curricular involvement (sports, clubs, etc.)
6. Social involvement (movies, dances, dates etc.)
7. Manual communications classes
8. Strong negative experience

The six variables not used by the program were: sex, year in school, read about deafness before coming to college, deaf roommate, academic involvement, and strong positive experience. This does not necessarily mean that these variables are unimportant. In fact, positive experiences and deaf roommates were frequently mentioned in the interviews. It simply means that these variables did not account for substantial variation within the system.

Analysis of the AID results yield no substantial leads for future investigation. The entire process was able to account for only 34.67% of the total variation. This is very little for an AID analysis using small numbers (Einhorn, 1974). There seems to be a difference in the attitudes of students depending upon the program or major in which they are enrolled. The presentation on deafness during orientation week also seemed to be associated with positive attitudes toward deafness. Interpretation beyond this point is risky given that the numbers are small and the technique is very powerful.

Discussion

The first research question reflects concern about the general valence of attitude toward deaf people held by hearing freshmen and transfer

students prior to their arrival on campus. This concern was generated by the prejudices and stereotypes of deaf people present in contemporary society and by Isaac's 1972 study questioning whether negative stereotypes are already possessed by incoming hearing students, or if such stereotypes are formed during contact with deaf students. The results show that the entering students tended to be favorable in their general attitude toward deaf people prior to arrival at RIT. The positive attitudes reflected in these responses are consistent with the mildly positive attitude generally reported in the literature for college-age populations (see Schroedel and Schiff, 1972).

The next question was whether or not attitudes toward deaf people changed among students in this sample after six months on a deaf-hearing campus. If so, what was the nature of this change? The investigation showed a downward trend after six months from the generally high positive attitudes expressed by respondents during the previous summer. This trend was not statistically significant at the .05 level. It was, however, consistent with Walter's (1969) findings among the RIT faculty and with theoretical perspective. Walter suggests that his observations reflected a change from idealism in education to realistic classroom practice. The theoretical argument in this paper is similar but more general in that it suggests that such changes may be due to the social reality of confronting "ideal" norms with the "real" norms of the culture. In other words, the trend is seen as a function of unavoidable violations of everyday role expectations. Consideration of this pos-

sibility may suggest a number of implications for altering existing programs. However, the reader is reminded that we were unable to reject the null hypothesis of no significant change. Further research should be done on attitudes and role expectations on an integrated deaf/hearing campus before any radical changes are implemented.

The literature on dominant-minority relationships also provides some interesting considerations for this study. Propositions from this field suggest that large numbers, rapid increases in numbers, rapid changes in standard of living, and cultural differences on the part of the minority group (i.e. deaf students) would tend to slow down the rate of assimilation of deaf students into the student body as a whole. With the opening of the new complex, all of these conditions were present at this college. Other propositions suggested that hearing students and deaf students living in close physical proximity and engaging in cooperative interaction with respect to common interests were likely to find real friendships.

The investigators wanted to know whether or not attitudes toward deaf people varied among hearing residence. Specifically, we wanted to know whether living in the complex with large numbers of deaf students, where programs and facilities were geared for deafness; resulted in any substantial differences between the attitudes held by hearing residents and those expressed by hearing students living in the other residence halls where deaf students are relatively few in numbers. It was surprising to find no significant differences in attitudes between these two groups.

The effect of living arrangements on the attitudes of students was difficult to assess in this study. Lack of communication between deaf and hearing students, however, seems to have been a factor. Hearing students living side-by-side with deaf students reported communication problems as a barrier to interaction. In interviews, hearing students said they tended to associate primarily with other hearing students and perhaps with a few of the hard of hearing students. The very deaf, primarily manual students, reportedly tended to stay within their own groups where they could communicate with ease. These comments had further support from the very strong agreement by hearing students in both dormitory settings with the statement on the interview schedule which says "that the deaf tend to stay to themselves."

In addition to knowing whether or not overall differences and attitudes existed by residence hall, the authors were interested in expressed differences between the attitude statements themselves. Among the 25 statements on the interview schedule, we noted two general groupings. First, positive attitudes seemed to center around one-to-one interpersonal characteristics. Deaf students were seen as "friendly," "outgoing," "warm," "helpful," "patient," "polite," etc. Negative attitudes, on the other hand, clustered about social expectations or norms which deaf students apparently violated. Hearing students viewed the deaf students as being "immature," lacking in leadership, being "overemotional," evidencing inappropriate classroom behavior (late, sleeping, etc.), and as having poor social manners (door pounding,

general noise, late hours, destruction, etc.). (This suggests to us that while hearing students found deaf peers to be nice on a one-to-one basis, they viewed certain behaviors displayed by some deaf students as inappropriate and in violation of everyday expectations within the student culture.)

The investigation did not find any direct evidence that the relatively large numbers of deaf students or the rapid growth in their numbers adversely affected assimiliation of deaf students into the student body. Comments were made, however, that in the older dorms (where deaf students were fewer in number) deaf persons were better known and accepted as individuals.

Finally, although the AID analysis of student backgrounds and activities yielded no substantial research leads, interview comments on personal experiences gave support to the notion that the hearing and deaf students living in close physical proximity and engaging in cooperative interaction with respect to common interests very often found real friendships.

Implications

Traditionally, the literature has strongly suggested that acceptance of impaired students by the rest of the students in the classroom plays an important part in the social development of handicapped children. The outcomes of this investigation reinforce the feeling that this variable should not be ignored, left to chance, or simply given lip service when planning and implementing mainstreaming programs. Further study should

be made of everyday interaction between handicapped and other students in the educational environment. For example, the phenomenon of real and ideal norm conflict should be investigated under controlled experimental and quasi-experimental conditions. Further investigation and educational programs might well focus on social norms rather than concentrating only on psychological characteristics. This could include researching handicapped students' abilities to pick up social cues and social tactics. Such efforts would hopefully aid interaction among all students in the educational setting and beyond.

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